FOLIO

Kaplan Applauds Government's Discussion Paper—to a Point

The audience at the third day of Spring Convocation (6 June) heard the following address by J. Gordin Kaplan, Vice-President (Research).

Mr. Chancellor, distinguished guests, members of the graduating class and their families, colleagues and friends: Within the next month the Government of Alberta is to bring forward a policy paper on the economic development of our province. Given the importance of this event to the universities and to us all, I propose to devote my report to an analysis of some of the important issues involved. In particular I shall tell you about an exciting discussion paper, "Science and Technology Development in Alberta," issued in March 1984 by the Minister of Economic Development and by the Chairman of the Cabinet Committee on Science and Research Policy.

At the present time, the economy of this province largely depends on the extraction of natural resources—petroleum and gas, mainly—and their sale without significant value added; about two-thirds of Alberta's economy is based upon this source of wealth. But these resources are rapidly becoming depleted: in particular, our conventional crude oil will be exhausted in little more than a decade. What do we do then? Or more to the point, what are we to do now to ensure that we have a future after these easily extractable resources have gone?

It is evident that two strategies are required and we must use both. The first is to develop those energy sources and renewable resources that we under-utilize at present. We obviously must improve the extraction and utilization of coal, heavy petroleum and the bituminous oil-bearing sands. We must also explore ways of maximizing the value of our agricultural and forest products. The second path lies in

attracting new, and expanding existing, industries, especially the rapidly growing number of companies whose products depend on microelectronic and chemical technologies. Success in both of these strategies depends in large measure on Alberta's ability to develop the science and engineering that are essential to both.

The government's discussion paper puts the matter in clear perspective: "Research, science and technological development are therefore key to Alberta's viability. They can provide the engineer for the maintenance and future growth of the economy, to an extent not possible with other conceivable alternatives. Consequently, it is essential that Alberta maintain a healthy program of scientific and engineering research, to be subsequently developed into technology and directed to enhance the province's economic and social development and to improve the quality of life. It is recognized that in a time of financial restraint such a program will require substantial courage, but it must be noted that an industrial society which cuts back on its research and development during economic recession is akin to an agricultural community that eats its seed grain during periods of drought."

I strongly agree; but let us not forget that the universities are also seed grain that had better be conserved during times bad and good.

Initiatives: Splendid and Otherwise

With respect to the first of these two strategies, namely enhanced exploitation of under-utilized fossil fuels and of renewable resources, the government has taken some splendid initiatives and some about which I have serious reservations.

Among the former were the founding in 1975 of the Alberta Oil Sands Technology and Research Authority (AOSTRA) which has catalyzed extensive research in the extraction and processing of non-conventional petroleum: that from the bituminous sands and the so-called heavy oil. Another initiative was the establishment, jointly with the federal government, of the Energy Resources Research Fund (ERRF). This agency has just recently produced a strategic working proposal of development of coal research. The universities of this province have found this proposal seriously deficient in that it displayed a truly magisterial indifference to the contributions of the universities to the success of research in the extraction, transport and utilization of coal; yet, without the active participation of the universities, this program is doomed to failure. We have had amicable discussions with the ERRF adminis tration; as a result, the Universities of Alberta, Calgary and Lethbridge have just submitted our joint view of what the role of the universities must be in development of this valuable resource. We have reason to hope that the final document will be more realistic with respect to the collaboration of the universities in coal research. I must also make mention of the important contributions of the Alberta Research Council to research in coal, oil sands, heavy oils and renewable resources. Substantial sums have been spent by these three agencies and this investment is likely to pay off. Increased coordination of and communication among those agencies is now required.

On the other hand, provincial investment in out-of-house research in agriculture (Farming for the Future, created in 1978) and forestry have been miniscule and unlikely to contribute significantly to the future of

these important industries. Funding from Alberta Agriculture has supported worthwhile research that will benefit primary food production at the present time. However, no funding is granted for long-range research projects that will determine how agriculture will be conducted in the next decade. Let me give an example: One of the areas of research on which modern agriculture increasingly depends is the new field of agricultural biotechnology and the molecular genetics of plants. Alberta's contribution to this rapidly advancing field is essentially zero, a record of which neither the government nor the University can be proud. I have tried to initiate discussion with officials of Alberta Agriculture about this serious

Summer Publishing Schedule

Folio will be published biweekly during July and August. It will appear on 12 and 26 July, and 9 and 23 August.

Current deadlines will remain in effect.

Folio will revert to a weekly publishing schedule on 6 September. \square

North Entrance to HUB Closed

The north entrance to HUB was closed to vehicular traffic on 21 June. The closure, necessitated by the construction in and around the Faculty of Business Building, will be in effect until 2 August.

Access to HUB, the Humanities Centre and Faculty of Business loading docks is from the south end of HUB, 89 Avenue and 112 Street.□

University of Alberta

problem: we shall continue to press the point. The stakes are too high to justify indifference whether on the north or south bank of the North Saskatchewan River.

Let me now turn to the other path that our provincial government has indicated we must take for our economic survival, that leading to the development of strong technology-based industries within Alberta. The country that has surprised the world by the rapidity and success of its move in this new direction is, of course, Japan. Two years ago, I participated in a Financial Post symposium on the new technologies (Ottawa, Febrary 1982). One of the other speakers was the First Secretary of the Japanese Embassy: his subject was the development of Japanese science and high technology industry. I would like to parapharse the startling remarks he made at the beginning of his talk. At the end of World War II, when Japan was about to embark on its amazing program of industrial expansion, we Japanese, he said, had three enormous advantages over you in the West. In the first place, we had a world-wide reputation for producing low quality merchandise that nobody would buy (today's graduates may be surprised to learn that children of my generation were forbidden by their mothers to play with Japanese toys which were considered to be poorly made junk). Our second advantage, he continued, was that we had lost the war and our

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cities and factories had been destroyed. Our third advantage was that we had and have practically no oil or gas or natural resources of our own—importing some 99 percent of our energy needs and 96 percent of our raw materials.

What this Japanese diplomat was in effect saying was that if Canada depended on the outside world for its energy and resources the way Japan does, then either we would already have moved rapidly and successfully to expand our industrial research and development and our high technology industry or we would have ceased to exist as an independent nation. Only the resource rich can be as lazy as Canada has been with respect to research and technological development and our patrimony is running out fast.

The Alberta Government has already taken some bold and novel steps to develop high technology industry in this province, most notably the creation of Vencap Equities in 1983; its function is to provide venture capital to high risk, advanced technologybased industry. The discussion paper to which I have referred proposes two new and imaginative initiatives that would in my opinion have a major impact. The first is the creation of a Technology Development Authority whose functions would include technology transfer from the universities to the private sector, the provision of advice and assistance to companies and individuals in the "commercialization of forefront technology' and the coordination of provincially funded R & D. This Technology Development Authority would then create an Alberta Innovation Centre which would constitute a one-stop shop for inventors, scientists, engineers and companies requiring support in patenting and licencing intellectual property, in industrial engineering, in preparation of business plans and in arranging financial participation by the private sector in new high technology enterprises.

Some Reservations

I must applaud the government for its initiative in producing this exciting discussion paper and I urge them to implement the two proposals. Of course I have some reservations: In particular there is some vagueness with respect to the role of the Technology Development Authority vis-à-vis the Innovation Centre on the one

hand and the Alberta Research Council and the other provincial research bodies, on the other. However, while these objections are non-trivial, they can be overcome. It would also be too much to expect that these new initiatives would constitute a simple solution of all the problems of our industrial development. The journalist H.L. Mencken once said that every complex problem has a simple solution and it is wrong.

The industrial expansion of Alberta is indeed a complex problem and although it can be greatly aided by creation of a technology development authority, it needs more than that. What else it needs may be illustrated by the following daydream. Suppose that someone were to give me an unlimited supply of cash and credit and were to tell me to use it to bring to Alberta any one of the world's leading companies or institutions but to chose the one that would have over the years the greatest effect in promoting the economic growth of our province. I would not bring back General Motors or even Apple Incorporated. I would try to buy MIT or Stanford. It might prove very expensive to move MIT or Stanford or Cambridge to Edmonton. It would be cheaper and quicker for the provincial government to give its universities the means to grow into institutions of comparable quality. It is our ambition, Mr. Chancellor, to grow to the level of excellence achieved by these world-renowned centres of research and learning. We are already on the way. This would be the best way to improve the major contribution that the University already makes to the economic well-being of the province and to the quality of life of its citizens.

One specific initiative I would like to see included in the government's forthcoming policy on economic and technological development would be the creation of one or both of the two new research foundations proposed a year ago by us and by our colleagues at the other universities of Alberta. One of the proposed foundations, with the acronym ANSER, was to be a foundation for agriculture, natural sciences and engineering research. The other was to be in the human and social sciences. One of the most creative acts of any government, national or provincial, was the establishment in 1980 of the Alberta Heritage Foundation for Medical Research. This has already enabled the two Alberta medical faculties to attract to Alberta some 60 medical scientists who are engaged mainly in research and graduate teaching; these new scientists will help the two universities to achieve international prominence in clinical and basic medical research. The time is now ripe for the creation of new research foundations in the other areas upon which the progress and wellbeing of humanity depends.

Medical research stands on the shoulders of the natural sciences and engineering: the former cannot flourish if the latter are neglected. And of course it is research in the natural sciences, agriculture and engineering, and in the social sciences, that will have the most immediate application to industry and technology.

I add, not as an afterthought but as axiom, that if the University is to contribute to the economic well-being of the community that supports it—as indeed it should—it must remain true to its primary calling: the search for knowledge about mankind and the universe and its dissemination to our students and to the world.

Let me summarize my major points: 1. The province is about to bring out a far-reaching plan for development and industrial expansion in the field of advanced technology.

- 2. A discussion paper, "Science and Technology Development in Alberta" has appeared and some of its ideas will hopefully be incorporated in the long-range planning of the province. The paper clearly recognizes the importance of the Alberta universities in attainment of the goals of resource development and industrial expansion. 3. Some of its proposals, including those for creation of a Technology Development Authority and for an Innovation Centre, are excellent initiatives that would have an enormous effect in attracting industry and transferring technology from the universities to the private sector.
- 4. The universites are valuable resources—like the seed corn mentioned in the discussion paper—and vital to the attraction of new, research-based industry. One major contribution to the future economic and social health of Alberta would be the provision of the means that would encourage the Alberta universities to complete their climb to the peak of excellence. They are already good: they could and should be among the best in the world. If the Edmonton Oilers can do it, so can the University

of Alberta!

5. The government has already taken a truly remarkable step in its launching of the Alberta Heritage Foundation for Medical Research. The two medical faculties of the province are on the way to establishing Alberta as a world centre of biomedical research. It is time that the government dropped the other shoe and created two new foundations, one to encourage research in the natural sciences, engineering and agriculture and the other in the human and social sciences. At the moment, there is no funding available, through provincial sources, for many of the most industrially and economically relevant areas of physics, chemistry, geology, engineering and agriculture: the government must not delude itself into thinking that it is already doing enough for these sciences-it is not.

6. The most exciting aspect of the government's recent planning is that it has forced the major players, namely industry, the universities, the Alberta Research Council, the government and its senior civil servants, to meet together and to plan boldly and creatively to ensure a bright future for the Province of Alberta.

Mr. Chancellor, my thoughts go to events that transpired on the beaches of Normandy exactly 40 years ago. This will seem like ancient history to today's graduates: most of you were 15 years away from being born. I urge you nevertheless to spend a few moments during this joyous day to think of what occurred on 6 June 1944 and of the significance of those acts of heroism and sacrifice in making our country and our part of the world so wonderful to live in.

All About Wills

The Legal Reform Office of Student Legal Services will present a public seminar on wills, Tuesday, 10 July.

The seminar will take place from 7 to 9 p.m. in 201 Law Centre.

Discussion will include the importance of writing a will, types of wills, preparation before visiting your lawyer to save you time and money, choosing an executor, the executor's duties, and the role of the public trustee.

To reserve free tickets or to receive further information, call the Legal Reform Office at 432-2226. □

Of Science and the Gold Rush

This year the Faculty of Science awarded two Gold Medals to outstanding graduating students at Spring Convocation.

The Lieutenant-Governor's Gold Medal was awarded to John F. Marko as the graduating student from an Honors program who demonstrated the highest distinction in scholarship for the Class of 1984. Mr. Marko also received a First Class Bachelor of Science degree in Honors Physics and the Louis S. Crosby Memorial Gold Medal in Physics.

Mr. Marko is a graduate of Louis St. Laurent High School.

He was awarded the Jane-Ann Robertson Memorial Scholarship in Physics at the end of the first year of his Honors program, the Louise McKinney Post-Secondary Scholarship in the last three years, and the Petro-Canada Scholarship in Honors Physics in 1982.

Mr. Marko will enroll this Fall as a graduate student at MIT where he



Messrs. Wong and Marko.

will hold a Research Assistantship. He hopes to study high energy physics and expects to be assigned to one of the theoretical groups. He will be awarded an NSERC Post-Graduate Scholarship in September 1984.

The Gold Medal in Science was awarded to Kin Hing Daniel Wong as the graduating student from a Specialization program who has shown the highest distinction in scholarship for the Class of 1984. Mr. Wong, who went to school in Hong Kong, also received a Bachelor of Science degree with Specialization in Computing Science, with Distinction.

Mr. Wong may pursue graduate work sometime in the future but at present he will be accepting a position in Hong Kong.□

GFC Closes Out Academic Year

General Faculties Council's last meeting of the 1984 academic year was held on 18 June with Vice-President Baldwin ("this is the bench strength") in the chair.

K.J. Hutchison, Physiology; E. Ives, Pediatrics; and A.R. Morgan, Biochemistry, will serve on GFC from 1 July 1984 to 30 June 1987. Peter Jarvis, Graduate Students' Association, joined the ranks on the day of the meeting. His term expires on 31 March 1985.

The annual report of the Committee for the Improvement of Teaching and Learning (CITL) was received by Council. With respect to learning, CITL feels that existing facilities do not meet the needs of students and proposes the establishment of a Learners Centre. To ensure that such a Centre meets the needs of students, the committee has asked the Office of Institutional Research and Planning to undertake a study to (a) identify student needs, as they relate to learning, and (b) determine student and staff

levels of awareness of the facilities currently available.

The advancement of the proposal for a Learners Centre hinges on the findings of the study.

Also in the works is a statement to be given to students entitled "Teaching and Learning Expectations." The thinking here is that the learning atmosphere of a large university is at variance with that of a high school or small college. "Many students, to their detriment, are unaware of certain fundamental differences," the report stated.

During 1983-84, 35 activities were organized for academic staff, and 751 persons attended these presentations (in 1982-83, 12 presentations were organized).

Two surveys conducted to get a line on the relevance of the CITL Workshop and Seminar Program for academic staff and graduate teaching assistants showed that both activities are well regarded.

The annual report of the Under-

graduate Teaching Awards Committee noted that the methods by which individual Faculties arrive at their nominee(s) for the Rutherford Award for Excellence in Undergraduate Teacing continue to vary. In the fall of 1984 the Committee will make suggestions to all Faculties in an effort to bring more uniformity and efficiency to the nomination process.

The Committee, convinced that a monetary value should accompany the Rutherford Award, has asked the AAS:UA for its position on the matter.

The Department of Industrial and Legal Relations will pull a vanishing act on 1 July. As endorsed by GFC, the Industrial Relations academic positions and courses will be transferred to the Department of Organizational Analysis and the Legal Relations academic positions and courses will be incorporated into the Department of Marketing and Economic Analysis.

In the words of Rodney Schneck,

Continued on page six

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sunday 1 Seventy-eighth University year be	monday Statutory holiday; University buildings closed	tuesday 3 Six-week Summer Session begins	wednesday 4	thursday 5	friday 6 ** Breton Plots Field Day	saturday 7
8	Until 12 July, International Union of Forestry Research Organizations Seventh Conference on Mycoplasma Diseases	10	11	12 *Folio published	Last day for students who have been required to withdraw to notify Student Counselling Services that they are seeking re-admission	14
15	16 GFC Executive	17	18	19	20 NASA Klondike Breakfast	21
22	23	24	25	26 Folio published	27	28
29	30 * GFC Executive	31				
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Acting Dean of the Faculty of Business, Legal Relations will work closely with economists and marketing staff in dealing with the environment of business to enable a more effective set of offerings in the Faculty and to increase research output. The Industrial Relations staff joining the Department of Organizational Analysis will aid the development of a comprehensive program and a research focus in human resources management which will potentially draw on other Faculty resources as well.

"Amalgamation into larger departments will permit a much more effective use of our scarce human resources in both an academic and administrative capacity," Dr. Schneck said.

The Faculty of Business was restructured into five departments in 1976, at which time the Department of Industrial and Legal Relations was established.

A proposal from the Campus Law Review Committee which recommends a standard, University-wide definition of academic dishonesty to form part of the Code of Student Behavior was endorsed. The definition included statements on plagiarism, cheating and misrepresentation of facts. The Code itself is being reviewed by CLRC and will be discussed in detail in September.

Tom Pocklington, Chairman of the Native Studies Committee, reported that during 1983-84, the Committee spent the majority of its time preparing—and revising, in the light of consultation—a report to GFC entitled "Proposal for a School of Native Studies and Expansion of Services Oriented to Native Students at the University of Alberta." The proposal was adopted by Council in February 1984.□

people

Einer Boberg (Speech Pathology and Audiology) directed an International Conference on Stuttering, in Banff, 7 to 10 June. A total of 125 speakers and registrants from seven countries participated. J.P. Das (Centre for the Study of Mental Retardation/Educational Psychology) gave a colloquium entitled "Simultaneous, Successive and Planning: Application of the Model to Remediation for Children with Reading Disability," at Ohio State University, 4 June. Just prior to that, he participated in two symposia at the Canadian Psychologists' Association annual meeting in Ottawa, along with other participants from the Department of Educational Psychology, H. Janzen, R. Mulcahy, G. Mancini, R. Conway and D. Murphy.

Ashraful Hasan (Political Science) presented the paper "The United States and Persian Gulf Security" at the 1984 Annual Meeting of the Canadian Political Science Association, held at the University of Guelph, 10 to 12 June.

At the Canadian Association of Slavists meeting at the Learned Societies Conference in Guelph 3 to 5 June, papers were read by: T. Carlton, L. Demko, T. Priestly, Y. Slavutych and O. Zujewskyi (Slavic and East European Studies): E. Mozeiko (Slavic and East European Studies/ Comparative Literature): A. Hornjatkevyč (Slavic and East European Studies/Canadian Institute of Ukrainian Studies); D. Marples (Canadian Institute of Ukrainian Studies); and A. Matejko (Sociology). Dr. Priestly was elected President of the Canadian Association of Slavists, and Dr. Hornjatkevyč was elected President of the Conference on Ukrainian

Bohdan Medwidsky (Slavic and East European Studies) presented a paper on "The Reflection of Everyday Life in the Songs of Ukrainian Settlers to Canada," at the All Union Ethnographic Conference held at the University of Chernivtsi, Ukrainian SSR, 24 to 26 May.

L.C. Green (University Professor) was a panelist at Queen's University Conference on "International Law: Critical Choices for Canada, 1985-2000." 14 to 17 June.

While harvesting wheat in the California Winter Nursery, Keith Briggs (Plant Science) was awarded the "Cochise Hard Times" trophy by fellow Canadian cereal breeders, in sympathy for loss of research funds for wheat breeding.

Olive Dickason (History) recently conducted a seminar at The Newberry Library, Chicago, on the topic "Micmacs and Europeans on the 18th Century North Atlantic Frontier." The seminar was held jointly with the University of Chicago's Workshop on Frontier Societies.

Mr. and Mrs. Yogi Sharma recently presented a cheque for \$5,000 to Jack Macki (Mathematics) to endow a scholarship in honor of Mr. Sharma's grandfather, Pundit Rameshwar Dayal Sharma. Mr. Sharma is a graduate of our University (Engineering) and is currently employed with Schlumberger in Europe. He is the son of A. Sharma (Mathematics).

Nico Stehr (Sociology) has accepted the Eric-Voegelin Professorship at the University of Munich. For a two-semester period, he will teach courses and offer seminars on structural analysis, symbolic media of exchange, the uses of social science knowledge, science and society in North America, Mannheim's sociology of planning and the philosophy of the social sciences.

service information

All information to be included in this column must reach the Office of Community Relations by 9 a.m. the Thursday prior to publication.

Coming Events

Lectures and Seminars

Extension—Visual Arts

28 June, 7:30 p.m. Ulla Viotti, Hammenhög, Sweden, "Architectural Ceramics for Public Buildings—An Insight into One Artist's Life, Work and Influences." 2-115 Education North.

Alberta Heritage Foundation for Medical Research

9 July, noon. L.J. Gathercole, Department of Oral Medicine, H.H. Wills Physics Laboratory, University of Bristol, "The Light Microscopic Wave-Form in Collagen Fibres and its Functional Significance." 4069 Dentistry-Pharmacy Centre.

10 July, noon. Dr. Gathercole, "Biomechanics of Periodontal Ligament." 4069 Dentistry-Pharmacy Centre.

Matters of Faith

St. Joseph's College

Mass conducted daily at 7:30 a.m. and 12:30 p.m., Saturday at 12:30 and 4:30 p.m., Sunday at 9:30 and 11 a.m.

Radio and Television

Television

Programs broadcast on ETV Q-9 and C-13. 4 July. 8 p.m. "Images of Alberta," hosted by Kanhaya Gupta. Guest: Tom Peacock, Actor and Professor of Drama.

Exhibitions

Ring House Gallery

Until 15 July. "Water & Colour & Paper", 59th Annual Exhibition of the Canadian Society of Painters in Water Colour.

Theatre

SUB Theatre

30 June, 8 p.m. The Society of Cheremosh presents "Cheremshyna and Friends in Concert." For more information, call Andy Matichuk at 488-7753.

Non-Credit Courses

Computing Services

MTS (Michigan Terminal System)

MTS and Editor Fundamentals (Prerequisite) AJ510 Operation and Visual Editing MTS Overview (Prerequisite)

TEXTFORM

Introduction to Text Formatting (Prerequisite)

Graphics

Introduction to Plotting Integrated Graphics Overview

Statistics

Data Preparation for Statistical Packages (Prerequisite) Introduction to SPSSx SPSSx Conversion Introduction to BMDP Introduction to MIDAS Introduction to MINITAB Introduction to TROLL

Microcomputers

Introduction to the IBM PC

The above courses are offered regularly through the day with limited evening selections. Registration will be taken over the phone for all courses except evening courses. These may be made in person at 352 General Services Building, or by mail. Payment must accompany registration for all evening courses. Please make cheques payable to the University of Alberta.

Waiting List Courses

The following courses are only offered when a sufficient number of people express an interest.

Advanced Text Formatting

Courier Operation and Visual Editing
Introduction to Programming
Introduction to Typesetting
Introduction to APL
Introduction to the Array Processor
Introduction to APAL

Introduction to Clustan
Introduction to TSP
Introduction to Osiris
For more information on any of the courses listed above, telephone the Training Assistant at
432-2511, between 8:30 and noon, weekdays.

Devonian Botanic Garden

For further information on the courses listed below, call 987-3054.
Wildflowers of the Castle River and Waterton

Wildflowers of the Cardinal River Divide Herbs for the Handicapped Hunting for Edible Mushrooms Cattail Coil Basketry

Notices

Faculty Advisors Required for Thailand Seminar

Three faculty advisors are required to guide 30 students on a World University Service of Canada seminar in Thailand during July and August 1985.

The seminar is intended to provide the students with their first exposure to development issues through in-country field research.

Faculty advisors should preferably have experience in international development in their area of specialization and ideally in the southeast Asian region.

English is the working language of the seminar and a familiarity with Thai would be an asset.

For further information, contact: World University Service of Canada, P.O. Box 3000, Station 'C', Ottawa, Ontario K1Y 4M8. Telephone (613) 725-3121.

Positions Vacant

The University of Alberta is an equal opportunity employer but, in accordance with Canadian Immigration requirements, these advertisements are directed to Canadian citizens and permanent residences.

Student Housing Officer

The Department of Housing and Food Services provides residence and housing facilities for more than 3,000 students at one of Canada's largest universities. Our department operates under a philosophy of providing a residential environment which enhances academic life while also operating within a mandate to break-even financially.

We are seeking an experienced, innovative, team-oriented Student Housing Officer who will be responsible for effectively managing a day-to-day operation that provides comfort and secure accommodation to students in six major housing complexes. You will initiate and maintain housing policies and procedures while managing occupancy, security, maintenance and special projects. You will also actively liaise with student/tenant groups, resident deans, departmental managers and other University administrators. The position reports to the Director of Housing and Food Services and supervises a support staff of approximately 80 people and manages a \$7,671,000 yearly operating budget.

Qualified applicants must have a minimum of three years' related experience, preferably in a large academic institution. A bachelor's degree in a related field is required.

Salary range: \$28,740-\$43,100 per annum commensurate with experience. The University offers a comprehensive benefits package, including one month annual vacation.

This position is currently under review

Please submit a comprehensive résumé to: David Bruch, 41 Lister Hall, University of Alberta, Edmonton, Alberta T6G 2H6.

International Affairs Bulletin Board

The Bulletin Board is an MTS file that announces new publications, visitors to campus, faculty travelling elsewhere, conferences and meetings, and general messages in the area of international development.

All MTS account holders may consult the Bulletin Board file from a CRT or hard-copy terminal by signing on to their MTS account and typing the command: #RUN X341:BULLETIN.

Non-Academic Positions

To obtain further information on the following positions, please contact Personnel Services and Staff Relations, 2-40 Assiniboia Hall, telephone 432-5201. Due to publication lead time and the fact that positions are filled on an on-going basis, these vacancies cannot be guaranteed beyond 22 June 1984. For a more up-to-date listing, please consult the weekly Employment Opportunities Bulletin and/or the postings in PSSR.

Clerk Steno II (\$1,161-\$1,390) Romance Languages

Purchasing Clerk II (\$1,294-\$1,561) Materials Management

Admissions Records Clerk (\$1,294-\$1,561) Registrar's Office

Clerk Typist III (Part-Time, Trust) (\$8.53-\$10.29/hr.) Applied Sciences in Medicine Clerk Typist III (\$1,294-\$1,561) Library Science Clerk Steno III (\$1,294-\$1,561) Extension Clerk Steno III (\$1,294-\$1,561) Forest Science Clerk Steno III (\$1,294-\$1,561) Sociology

Clerk Steno III (\$1,294-\$1,561) Mineral Engineering
Clerk Steno III (\$1,294-\$1,561) Physics
Student Records Processing Clerk (\$1,294-\$1,561)

Arts
Systems Control Clerk I (\$1,338-\$1,625) Personnel

Services and Staff Relations
Administrative Clerk (\$1,442-\$1,766) Extension
Administrative Clerk (Student Housing Coordi-

Administrative Clerk (\$1,442-\$1,766) Extension Administrative Clerk (Student Housing Coordinator) (\$1,442-\$1,766) Housing and Food Services

Administrative Clerk (Admissions Secretary) (\$1,442-\$1,766) Law

Office Services Senior Clerk (\$1,625-\$2,003) Sociology

Departmental/Executive Secretary (\$1,625-\$2,003) Personnel Services Departmental/Executive Secretary

(\$1,625-\$2,003) Computing Science Departmental/Executive Secretary (\$1,625-\$2,003) Senate

Departmental/Executive Secretary (Term) (\$1,625-\$2,003) Religious Studies Senior Student Records Processing Clerk

(\$1,697-\$2,092) Arts Storeman I (\$1,205-\$1,442) Art and Design Technician I (Trust) (\$1,497-\$1,842) Pharmacy Technician I (Trust) (\$1,497-\$1,842) Physiology

Technician I (Trust) (\$1,497-\$1,842) Pharmacy Technician I (Trust) (\$1,497-\$1,842) Physiology Instrument Technician II (\$1,697-\$2,092) Chemical Engineering

Technologist I (Trust) (\$1,697-\$2,092) Pathology Biochemistry Technologist I (Trust) (\$1,697-\$2,092) Cancer Research Group

Biology Technologist I (Trust) (\$1,697-\$2,092) Zoology

Electronics Technician IV (\$2,280-\$2,834) Computing Science

Specialist Technician (\$2,596-\$3,239) Electrical Engineering

For vacant library positions, please contact the Library Personnel Office, Basement, Cameron Library, Telephone 432-3339.

Advertisements

Advertisements must reach the Editor by 3 p.m. on the Thursday prior to publication date which date also serves as the deadline for cancellation of advertisements. The cost of placing advertisements is 30 cents per word with no discount for subsequent insertions. There is a maximum limit of 30 words and a minimum charge of \$1.50. Contributors' corrections will be assessed at \$1.50 for each line in which an insertion is made. Advertisements cannot be accepted over the telephone. All advertisements must be paid for in full at the time of their submission

Accommodations available

Sale - Grandview, University. Four bedrooms. 437-7299 evenings.

Sale - By owner. Three-bedroom house with suite, close to Faculté Saint-Jean. Furniture and household goods. 469-9871.

Sale - Owner. Renovated, two-storey, two-bedroom house. Hardwood floors throughout. Enormous kitchen. Artist's studio in basement, rentable as suite, separate entrance. 10834 79 Ave. Walk to University. \$85,000. 439-6528, 462-2215.

Rent - Bungalow, Belgravia, 11440 71 Ave. \$600. 487-3053, 489-2795.

Mountain recreational building lots, fully serviced underground. Development 40% sold, mostly professionals and academics. From \$25,000. Call evenings, 432-1950, or Overlander Mountain Park Properties, Jasper East. 866-3790.

Anxious to sell - Three-bedroom home in Parkallen. Hardwood floors, 1 1/2 baths, double garage, basement suite. \$86,000 mortgage at 12 1/2%. Asking \$109,000. Trade for Calgary home. Offers? Collect 283-9974, 286-1922.

Rent - Three-bedroom, fully furnished bungalow. Garage, one-year lease, 1 Sept. 1984-31 August 1985. 10524 62 Ave. Phone 434-7111. References, \$500/month.

Rent - Basement suite, furnished, one-bedroom, \$250/month. Also, housekeeping room, \$150/month, utilities included, ladies, nonsmokers, Bonnie Doon. Near bus. 466-7393.

For sale - Windsor Park! 1,440 sq. ft., fireplace. Fantastic kitchen (skylight), developed basement, double garage, park-like yard. Price \$127,500. Call Helen Schick, 436-2551, or 437-2110 (office). Canada Trust Realtor.

Sale - 4-6 acres. Rocky Mountain lots near Tête Jaune, B.C. (270 miles), from \$13,650. 25% down, 10% interest. 604-566-4721. John Peterson, Box 901, Valemont, VOE 2Z0.

For rent - 10839 University Ave. Well furnished, one-bedroom apartment. \$400. Caretaker, #16. 431-0029, 488-9151.

Rent - Laurier Heights, four-bedroom bungalow. Furnished, seven appliances, garage. Available September for 4-8 months. 484-5460 evenings. Rent - Walk to University, four bedrooms, four ap-

pliances. Call evenings, 483-9432. Sale - University, quiet, bright, two-bedroom condo. 1 1/2 baths, six appliances. \$74,000.

432-0119.

Rent - 1 September 1984-31 January 1985, four bedrooms, North Glenora. \$650/month, negotiable. 452-0635.

Sale - Blue Quill. 1,240', three-bedroom bungalow. Fireplace, 1 1/2 baths, double garage, developed basement, excellent neighborhood, good financing. \$87,500 or best offer. 434-9133, private sale. For rent - Family home. Leaving area for two years. Four bedrooms, quiet, park, fireplace. 466-1790.

Rent - Lease, four-bedroom, furnished house. Garage. August 1984-1985. Petrolia. Good University access. Negotiable. 434-5640.

Wanted, one person to share attractive house. Close to University. Garden. Phone Les, 432-5933, 439-2835.

Rent - Parkallen, three-bedroom house. Two-car, heated garage. Available 1 July, \$710. Phone 435-6803 between 5 p.m. and 9 p.m.

Sale - Turn of the century, Windsor Park home. Eleven rooms, five bedrooms and three baths. Unique blend of old-world charm and contemporary convenience. Robert Kully, A.E. LePage, 437-7480, 437-5364.

Rent - Old Strathcona. Two-bedroom suite, top floor of house. 432-0303, 987-2738 evenings. Sale - Belgravia. Solid, well maintained, semibungalow. Large, nicely treed lot. Call Chris

Tenove, 433-5664, 436-5250. Spencer's. Sale - \$59,500. Belgravia. Good, quiet location. Bungalow. Call Chris Tenove, 433-5664, 436-5250. Spencer's.

Sale - Immaculate, remodelled home. Quiet crescent location. Huge, treed lot. Many nice features. Call Chris Tenove, 433-5664, 436-5250. Spencer's.

Sale - University condo. Luxury and only \$89,000. Pool, sauna, etc. Five appliances. Call Chris Tenove, 433-5664, 436-5250. Spencer's.

Sleeping room - Male graduate, student, nonsmoker. Quiet home, private entrance. Near Lister Hall, 439-1793.

Rent - Modern, two-bedroom apartment. Two blocks University, 1 1/2 baths, all appliances, parking, no pets. 486-6600 evenings, weekends.

Rent - Large, executive home. Aspen Gardens. Six bedrooms, four baths, garage, family room, fireplace, pool. Available September. 438-4447. \$900.

Rent - Quiet, luxurious townhouse. Share male/ female. Furnished/unfurnished bedroom. Bus, parking. Available summer/long-term. \$300/month. Sherry, 436-2950.

Rent - Belgravia. September-June. Furnished, four-bedroom, sabbatical home, renovated, large lot, references. 436-5703.

Accommodations wanted

PDF with family desires house to rent. References, 436-0139.

Automobiles and others

1980 Malibu, classic, two-door Landau. 305 V8, automatic, ps/pb, console, buckets, AM/FM, stereo, cassette. Excellent condition. 487-0248, 432-2544.

V.W. custom camper 1973. Very good condition. \$3,800. 436-8067, 432-4782.

Goods for sale

Sabathil Harpsichord, #1573, concerto II. Manufactured in 1970. Beautiful, clear sound. 432-5690 or 987-4569.

Yamaha P2F studio, upright piano, \$3,500. 481-2861.

Return ticket to Ottawa for sale. Leave Edmonton 26 August, return from Ottawa 7 September. \$225 or best offer! Call Wendy, 433-1745.

For sale - Registered Appaloosa gelding, 10 years, excellent with children. \$750. Phone 432-6342 or 1-662-2280.

Books bought and sold - The Edmonton Book Store in HUB Mall will pay cash for book collections and individual, rare items. Appraisals available. Open seven days a week. 433-1781.

Barbecue charcoal unit, enamelled steel, two racks,

trident stand, excellent condition. \$75. 432-4780 days, or 482-5270 evenings.

Electric lawnmower, just reconditioned, \$50. Electric fan, 18", \$10. 432-5490 days, 482-1155 evenings.

Must sell, Yamaha grand piano, 5'7". \$10,000 or best offer. 433-0210.

Services

Donnic Word Processing. Specializing in theses, manuscripts, etc. 8315A 105 St. 432-1419.

Singing teacher, Eileen Turner, 439-4661.

Professional typist - Word processing. Specializing in theses and dissertations. Gwen, 467-9064.

Word processing. \$18 (hour Turing form)

Word processing - \$18/hour. Typing - from \$1.50/page. Greek symbols and equations. 432-0138.

Will type papers, reports. \$1.25/page. Westend. 481-3251.

Piano, theory lessons. Western Board. Robert Gariepy. 433-7238.

Keep-fit yoga: Evening classes start 5 July. Registration: 28 June, room 9, floor 14, Tory Building, 4:30 p.m. Information: Box 184, University Post Office.

Academic staff: Supplementary healthcare reimburses treatment costs for backaches, stress tension at Back Basic Therapy. Maria Krieg, university-trained in Düsseldorf, offers: Heat, massages, chirogymnastics, interferential electrotherapy. 436-8059. 11627 75 Ave.

For prompt, accurate typing of reports, theses, letters, etc., call 481-2861. JL Citation Services. Computerized literature searching by experienced scientists. Full searches, automatic updating. 487-8652. M-W-Th! 1-5:30, Tu-W-F: 8:30-12:30.

Quaker worship, Sundays, 11 a.m. Soroptimist Room, YWCA. 100 Ave. 103 St. L'Atelier, French tutorial: Small classes at various levels. Adults and children (weekdays). Semiimmersion (Saturdays). Contact Yves Puzo, 432-7565, Tuesdays and Thursdays, 3-6 p.m.

COLD SORES!

Do you suffer from recurring cold sores?
Would you like to participate in a CONFIDENTIAL, controlled study by a University of Alberta research team investigating a promising anti-viral medication?

For more information, call Sheri or Joanne at 432-2691.

School of the Alliance Française

Summer French Courses

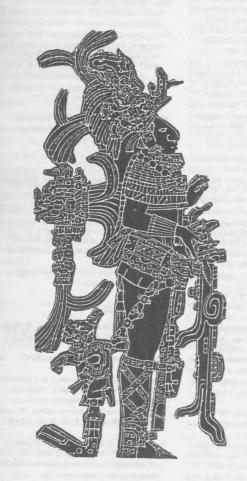
Classes during July and August

For information, please call 468-4340

French Course for Professionals Faculté Saint-Jean

August 7 to 24, 1984

For information Call: 468-1254 Ext. 206



IN SEARCH OF THE ANCIENT MAYA

ART AND ARCHAEOLOGY TOUR OF THE YUCATAN November 12-25,1984

All correspondence and requests for information should be directed to:

The University of Alberta
Faculty of Extension — Visual Arts Division
432-3034 or 432-3116

